

LISTING OF THE CLAIMS

1. (previously presented) A method for displaying stereoscopic images, comprising the steps of:

converting stored model object data of first objects, made of polygons having 3D coordinates, which are to be viewed in a planar view because of image formation positions being outside a stereoscopic viewable range of stereoscopic display device in a 3D coordinate to reference camera coordinate system data with its origin at a reference camera;

converting stored model object data of second objects, made of polygons having 3D coordinates, which are to be viewed in a stereoscopic view because of image formation positions being inside a stereoscopic viewable range of stereoscopic display device in a 3D coordinate to parallax camera coordinate system data for right and left eyes respectively with their origins at parallax cameras for right and left eyes having predetermined parallax angles;

drawing the reference camera coordinate system data and the parallax camera coordinate system data for right eye as image data for right eye in a video memory;

drawing the reference camera coordinate system data and the parallax camera coordinate system data for left eye as image data for left eye in the video memory; and

synthesizing the image data for right and left eyes drawn in the video memory and displaying, on a stereoscopic display device, images mixing first and second objects.

2-8. (Canceled)

9. (Previously Presented) The method for displaying stereoscopic images according to claim 1, wherein the parallax angles of the parallax cameras are adjustable in real time by operations of an observer.

10. (Previously Presented) The method for displaying stereoscopic images according to claim 9, wherein the parallax angles are continuously and gradually varied as a result of the adjustment by operations of the observer.

11. (previously presented) An apparatus for stereoscopic images, comprising:

a geometry unit for converting object data of first objects made of polygons having 3D coordinates, which are to be viewed in a planar view because of image formation positions being outside a stereoscopic viewable range of stereoscopic display device in a 3D coordinate to reference camera coordinate system data with its origin at a reference camera and converting object data of objects which are to be viewed in a stereoscopic view because of image formation positions being inside a stereoscopic viewable range of stereoscopic display device in a 3D coordinate to parallax camera coordinate system data respectively with their origins at parallax cameras for right and left eyes having predetermined parallax angles;

a video memory for drawing the reference camera coordinate system data and the parallax camera coordinate system data for right eye as image data for right eye and further drawing the reference camera coordinate system data and the parallax camera coordinate system data for left eye as image data for left eye; and

a rendering unit for synthesizing the image data for right and left eyes drawn in the video memory, wherein a stereoscopic display device is provided that displays images mixing first and second objects using image data for right and left eyes synthesized by the rendering unit.

12-13. (Canceled)

14. (Previously Presented) The apparatus for displaying stereoscopic images according to claim 11, wherein an input unit is further provided, and wherein the camera parallax angles are adjusted in real time by the geometry unit according to a parallax adjustment signal input from the input unit in correspondence with operations of the observer.

15. (Previously Presented) The apparatus for displaying stereoscopic images according to claim 14, wherein the parallax angles are continuously and gradually varied as a result of the parallax angle adjustment.

16. (previously presented) A storage medium for storing a program run in an apparatus for displaying stereoscopic images, the apparatus being provided with a geometry unit for converting coordinates of object data of objects made of polygons having 3D coordinates and with a stereoscopic display device for displaying model data that has been subjected to the coordinate conversion, the apparatus when executing the program performing the steps of:

allowing the geometry unit to convert object data of the first objects which are to be viewed in a planar view because of image formation positions being outside a stereoscopic viewable range of stereoscopic display device in a 3D coordinate to reference camera coordinate system data with its origin at a reference camera and convert object data of second objects, which are to be viewed in a stereoscopic view because of image formation positions being inside a stereoscopic viewable range of stereoscopic display device in a 3D coordinate to parallax camera coordinate system data respectively with their origins at parallax cameras for right and left eyes having predetermined parallax angles;

drawing the reference camera coordinate system data and the parallax camera coordinate system data for right eye as image data for right eye in a video memory;

drawing the reference camera coordinate system data and the parallax camera coordinate system data for left eye as image data for left eye in the video memory; and

synthesizing the image data for right and left eyes drawn in the video memory and displaying, on a stereoscopic display device, images mixing the first and second objects.

17. (Previously Presented) The storage medium for storing a program according to claim 16, wherein the objects to be viewed in a planar view are objects having their image formation positions outside a stereoscopic viewable range of the stereoscopic display device in a 3D coordinate space.

18-19. (Canceled)

20. (Previously Presented) The storage medium for storing a program according to claim 16, wherein the parallax angles of the parallax cameras are adjustable in real time by operations of an observer.

21. (Original) The storage medium for storing a program according to claim 20, wherein the parallax angles are continuously and gradually varied as a result of the adjustment by operations of the observer.